

APPENDIX A

Defendants request that two full days be provided to depose each of the experts listed below, with leave to seek additional time with certain experts for good cause. Defendants also provide a brief justification for each expert on why such relief is necessary.

G. Caleb Alexander

Jane C. Ballantyne

David Cutler

David S. Egilman

Jonathan Gruber

David Kessler

Katherine Keyes

Anna Lembke

Jeffrey B. Liebman

Craig J. McCann

Thomas McGuire

Theodore Parran

Matthew Perri

Meredith Rosenthal

Mark A. Schumacher

Specific Grounds Justifying Defendants' Request for Relief:

G. Caleb Alexander

- Alexander submitted a *59-page report*, which includes *488 listed references*.
- “Preliminary analyses” of *15 different categories of abatement* remedies led Alexander to estimate a 10-year national abatement cost of \$452.9 billion. Alexander Report ¶ 176. The 15 abatement categories—each of which will need to be explored through questioning—include:
 - 1) Medication Assisted Treatment (medication and infrastructure)
 - 2) Criminal Justice Interventions (drug courts; post-incarceration housing and counseling)
 - 3) Mass Media Campaign (mass media campaign)
 - 4) Naloxone (improved naloxone access)
 - 5) Adolescent Interventions (prevention, screening, and intervention)
 - 6) Academic Detailing (peer outreach to prescribers, EMTs, dispensers)
 - 7) Pregnant Woman/Neonates (screening and housing for pregnant women, NAS treatment)
 - 8) Foster Care Interventions (medical and non-medical care, adoption costs, CPS)
 - 9) Hepatitis C/HIV Interventions (screening and treatment for Hepatitis C/HIV)
 - 10) Drug Disposal Programs (infrastructure and execution of drug disposal programs)
 - 11) Surveillance (national surveillance programs for OUD, overdose)
 - 12) Harm Reduction Interventions (SSPs, supervised consumption facilities, fentanyl testing strips)
 - 13) PDMPs (maintenance and improvement of PDMPs)
 - 14) Research (funding for safer & more effective pain and OUD treatment)
 - 15) Law Enforcement Interventions (LEAD programs, overdose units, anti-stigma training).
- Each analysis was predicated on a four-step approach, with some steps having multiple parts: (1) identifying the “potential components” for each abatement category and “estimat[ing] unit costs based on published literature, primary data sources, and budgets of existing program”; (2) applying assumptions for a “ramp-up” period and indirect costs; (3) modeling costs over 10 years, and; (4) applying unit costs to a “target” population based on the current baseline population and estimated changes in that population. *Id.* ¶ 177.
- Alexander’s supplemental report was provided on April 3, 2019. It included a previously unproduced 14-page “Technical Appendix” and 3 spreadsheets. The spreadsheets contain 30 separate sheets, which depict a wide range of tables, assumptions, analyses, sources, and data that are cited as support for Alexander’s estimates on ten-year abatement costs. For instance, one such sheet (“4[.] Input Calculations”) contains 5 separate tables and has approximately 570 rows of data.
 - Defendants have requested, but not yet received, the original versions of the previously unproduced “Technical Appendix” and spreadsheets.

Jane C. Ballantyne

- Ballantyne submitted a **90-page report**, which includes 219 listed references, and a **157-page list of materials considered**, which lists **2,072 individual sources**.
- The report contains **particular assertions against multiple individual Defendants**, including assertions against Purdue (*e.g.*, p. 18); assertions against Endo regarding Opana ER (pp. 38, 74, 78); assertions regarding Kadian against Actavis (*id.*); and assertions against Janssen (pp. 79-81). Each Defendant will require an opportunity to examine the expert on the specific allegations and opinions relevant to it.
- Conversely, many other contentions are collectivized, making it difficult to identify and distinguish the alleged conduct by individual defendants. *See, e.g.*, ¶¶ 1-2 (alleging that “opioid manufacturers” pushed the medical community to expand opioid use); p. 74 (“Manufacturers repeatedly emphasized the steady state of their extended release opioids in their advertising and promotion.”). Those distinctions will need to be explored through questioning.

David Cutler

- Cutler’s report—excluding back up materials—is 184 pages. Cutler uses more than **10 different quantitative frameworks**, including **three different regression** models.
- Cutler purports to calculate share of harms attributable to manufacturer misconduct (due to marketing) separate from share of harm attributable to distributor misconduct (due to failure to comply with CSA). Defendants will need adequate time to explore this.
- Cutler evaluates **five categories** of harm which he claims are in part attributable to Defendants’ misconduct (crime, addiction and mental health services, children and family services, juvenile court, and medical examiner). Each category will be the subject of questioning.
- Plaintiffs have still not provided all backup data necessary for Defendants to evaluate Cutler’s opinions. For example, Cutler has deleted key portions of the data set that he uses to proxy “harm,” without which Defendants cannot replicate his calculations.

David S. Egilman

- In his 141-page report and extensive exhibits, Egilman develops *over 480 different opinions*, totaling *over 3,000 pages*, for *21 Defendants*, each of which will need time to question Egilman regarding those unique opinions.
- Egilman's opinions are based upon allegations of concerted action by the "Venture" which refers to all Defendants in the Opiate Litigation (including their associated individuals and/or organizations).
- Egilman's report cites over *2,000 documents* produced by Defendants, Plaintiffs, or third-parties; over *36,000 pieces of medical literature* that Egilman considered, read, or reviewed; and cites an additional 166 "reference documents" totaling over 2,400 pages consisting of articles, news reports, case law, and patent applications related to multiple manufacturer and distributor defendants, among other writings. Defendants will need to probe the cited evidence and support in detail to determine if Egilman's opinions are properly supported.
- Egilman has published over 200 articles and book chapters and has testified as an expert witness in 24 prior cases regarding medical and business warnings issues. In addition, Egilman actively practiced medicine for approximately thirteen years, "treating patients and consulting in occupational medicine for large and small companies. [Egilman] treated patients with pain from cancer and chronic nonmalignant pain and at times prescribed opioids...."

Jonathan Gruber

- Gruber provides a written report absent substantial backup data that purports to evaluate the extent to which the alleged actions of Defendants contributed to the conduct at issue in Cuyahoga and Summit counties, and to use principles of applied economics to estimate the damages resulting from Defendants' conduct.
- However, Gruber's analysis is relying on econometric analysis performed by other experts (*e.g.*, Meredith Rosenthal, David Cutler, and Thomas McGuire) that he concedes in his written report will be impacted by "a separate report that will present an estimate of the share of shipments that distributor defendants could reasonably have been expected to identify as excessive and/or potentially suspicious, but this report does not need to be disclosed until April 15, 2019."
- Despite Plaintiffs' suggestion that Gruber's and others' reports are "focused and targeted" because such opinions are "well described," a plain reading of Gruber's report highlights that not only is his analysis dependent on other reports, but he anticipates further refinement and analysis based on the undisclosed reports that will not be provided to Defendants until next week. Gruber is concedes that his opinion may be impacted by these and other experts reports and testimony without any clarification or discussion as to simply how or why his allegedly independent opinion and analysis would be so substantially dependent on materials or testimony not yet disclosed to Defendants.

- Given Gruber’s substantial reliance on other expert reports and reports not yet disclosed, it is only appropriate to reserve at least two days of deposition for all defendants to understand what Gruber proposes to be an evolving and not yet fully informed economic perspective and proposed regression analyses of conduct at issue.

David Kessler

- Kessler’s report is **320 pages** plus over **650 pages of appendices**. The list of materials considered is 141 pages long. The report contains 1,248 footnotes, most of which cite specific documents. Kessler cites to ***tens of thousands of produced documents***, over 250 articles, and nearly 200 depositions, among other materials.
- Kessler’s report contains more than **50 opinions**, most of which are specific to particular Defendants, each of which will require adequate time to examine the witness to test the basis for his specific opinions:
 - Purdue (Pgs. 31-109)
 - Endo (Pgs. 109-163)
 - Janssen (Pgs. 163-252)
 - Teva (Pgs. 252-263)
 - Actavis (Pgs. 263-276)
 - Mallinckrodt (Pg. 276-291)
- Kessler offers opinions about 6 manufacturers and 11 separate medications. Each manufacturer is entitled to question Kessler about his opinions concerning its conduct with respect to each of its medications.
 - For example, Kessler offers 8 opinions about Janssen and its medications (spanning nearly 100 pages). These medications, Duragesic and Nucynta, each require their own questioning. That is because these medications were marketed at different times, contain different active molecules (fentanyl and tapentadol), and are administered differently (transdermal patch versus pill). Other medications on which Kessler opines likewise have important differences in active molecule, formulation, administration, and other characteristics.
 - Kessler also offers 12 opinions about Purdue and its products (again, nearly 100 pages).
- The report contains additional claims against several Defendants regarding involvement “with pain advocacy, [and] professional medical and trade group organizations.” *See, e.g.*, ¶ 583 (discussing American Pain Society and “Corporate Council” membership by Endo, Actavis, Mallinckrodt, Purdue, and Janssen.”).
- In addition, the report contains collectivized assertions against Defendants. *See, e.g.*, ¶ 578 (“[T]he opioid manufacturers contributed to altering the standard of care for the treatment of pain by encouraging healthcare providers to view pain as a ‘fifth vital sign’ that demanded aggressive treatment with opioids.”); ¶ 596 (“Opioid manufacturers

funded then the ‘APS Guidelines Program,’ which the APS used to fund its consultants.”).

- When Kessler has testified in litigation of smaller scope (*e.g.*, Risperdal litigation, which involved one manufacturer and one drug), his trial testimony spanned several days. Defendants are entitled to adequate time with this witness to understand all of his opinions and the bases for them.

Katherine Keyes

- Keyes offers eleven separate opinions, with several comprising multiple sub-opinions. Keyes’s opinions attempt to tie the increase in prescribing of opioids to manufacturers marketing; the supply of opioids to increases in opioid use disorders; the non-medical use of opioids to oversupply; opioid use to harm to adolescents; prescription opioid use to heroin and fentanyl use; prescription opioid supply to increases in overdoses; and alleged prescription oversupply to other community consequences, such as neonatal abstinence syndrome. She also opines on the contribution of economic factors to opioid issues; the health consequences of non-steroidal anti-inflammatory drugs compared to those of opioids; the need for Medically Assisted Treatment; and additional abatement strategies, such as naloxone distribution.
- Keyes’s report cites **204 references**, many of them complicated and lengthy studies that involve nuanced empirical analysis. To understand her conclusions fully and whether the evidence supports the opinions that Keyes offers, these cited references, as well as other materials, will need to be examined in some detail.
- Many of Keyes’s opinions will need to be covered by different groups of Defendants and individual Defendants. For example, Keyes’s discussion of manufacturers’ marketing will likely need to be addressed by individual manufacturer defendants, which promoted different products and engaged in different types of marketing.

Anna Lembke

- Lembke’s report is 98 pages, not counting appendices.
- The report offers **12 discrete opinions, one with 6 sub-parts**, each of which is the topic of detailed discussion.
- Lembke relies on at least **509 identified materials**, including many data-heavy analyses from scientific journals and 85 Bates-stamped documents produced by **five different manufacturer defendants**.
- Lembke identifies and forms opinions on the allegedly misleading promotional messages of five different manufacturer defendants, each of which is entitled to independent questioning to examine the underlying manufacturer-specific record and the opinions based thereon.

- Certain underlying information, including from qualitative interviews and databases, has still not been provided as outlined in an email sent to Plaintiffs on April 5, 2019.

Jeffrey B. Liebman

- Liebman proposes implementing a \$7.2 billion “Abatement Plan,” just for Cuyahoga and Summit counties.
 - His original report was submitted on the March 25 due date, but Plaintiffs provided a “supplemental” report 9 days later, which increased the estimated abatement costs by \$1.5 billion.
- The proposed Abatement Plan—which would cover a 15-year period—is divided into four overall categories, with a total of **19 separate sub-“elements,”** each with its own set of estimates and assumptions. All will need to be explored through questioning.
- The asserted costs for each of the 19 sub-elements range from \$8 million to \$4.3 billion.
 - The calculations for these costs are contained in **50 pages of spreadsheets/charts**, with multiple cross-references and external source citations.
 - For example, the calculations for the sub-element “cost of treatment” cross-reference and rely on assumptions from another expert report, an additional third-party academic study, cost reporting by the Economic Policy Institute, federal HUD projections, and inflation calculations.
 - Each of the other sub-elements, such as “medication-assisted treatment,” Naloxone, syringe exchange, media campaigns, and criminal justice system coordination, are similarly complex with multiple source notes.

Craig J. McCann

- McCann’s report is 94 pages with an additional **5,729 pages of appendices and dozens of voluminous excel spreadsheets**.
- A supplemental expert report was submitted on April 3, 2019 containing five previously excluded tables and an additional 95 pages of appendices.
- The report offers opinions about data for **13 different distributors** and 14 drugs. Each Distributor Defendant is entitled to explore the bases for McCann’s opinions regarding its alleged conduct.
- There is interplay between McCann’s report and the yet-to-be served Suspicious Order Monitoring reports, which will need to be explored through questioning.
- A substantial amount of underlying data still has not been provided, as outlined in a letter sent to Plaintiffs on April 5, 2019.

Thomas McGuire

- McGuire wrote *two separate reports* (addressing damages and public nuisance, respectively), which combine to opine that Defendants have contributed to causing over \$20 billion in harm.
- McGuire’s damages report primarily alleges that Defendants are responsible for either \$194 or \$223 million in damages allegedly suffered by the plaintiffs, but also alleges more extensive liability under several different alternative calculations (“Damages Due to Distributors’ Misconduct,” “Indirect Shipments Regression Method,” and “Damages Due to All Shipments”). Defendants need to fully understand each alternate method.
- McGuire’s damages report separately calculates damages for *19 distinct governmental divisions*—nine in Cuyahoga County and ten in Summit County—over a 13-year period.
- McGuire’s public nuisance report alleges that Defendants’ actions have generated over \$20 billion in societal harm.
- McGuire’s public nuisance report calculates harms in *five separate categories*, including novel calculations of societal costs of crime, Neonatal Abstinence Syndrome, and child maltreatment.

Theodore Parran

- Parran’s report spans *145 pages* and he identifies 221 distinct materials considered, including dozens of documents produced by several defendants and other entities.
- Parran’s opinions span *multiple subject matters*: addiction, pain management, marketing, and treatment. His report is *four separate expert reports rolled into one*.
- Parran offers approximately *35 specific opinions*, plus opinions on *approximately 25 marketing messages that specifically refer to and implicate several Defendants*. These marketing messages span numerous issues regarding the risks and benefits of opioid therapy. He opines on events that occurred over a more than 30-year period.
- Parran relies on the Matthew Perri report as foundation for his marketing opinions, injecting the 150-page Perri report into his own report and necessitating questions into his reliance on Perri.
- Parran cites dozens of publications and over 100 articles and other publications that he considered in forming his opinions, but to date, Plaintiffs have not complied with the order requiring them to produce all such documents not exchanged in discovery that are not “publicly and easily available without cost (e.g., over the Internet)” (Dkt. 941 at 7). Defendants have requested these materials.

Matthew Perri

- Perri's report is over **150 pages** and includes 19 schedules that total over 3,500 pages. The schedules are composed largely of **Defendant-specific content and claims**.
- Perri's claims and opinions specifically reference **numerous specific Defendants**: Allergan (e.g., ¶ 102); Purdue (e.g., ¶ 74); Endo (e.g., ¶ 67); Actavis (e.g., ¶ 70 n. 116); Janssen (e.g., ¶ 42); Teva (e.g., ¶ 128); Mallinckrodt (e.g., ¶ 128); Insys (e.g., ¶ 42 n. 46); McKesson (¶ 101 n.198); Walmart; Walgreens; CVS; AmerisourceBergen; Cardinal Health (see ¶ 98); Johnson & Johnson (e.g., ¶ 122 n. 244).
- Each affected Defendant is entitled to examine Perri regarding his allegations and opinions specific to them.

Meredith Rosenthal

- Rosenthal's expert report—not counting voluminous back up materials—is **207 pages**.
- The report develops different opinions for **8 different manufacturer Defendants**, each of which will need time to questions Rosenthal on their unique facts.
- Rosenthal uses **two different regression models** and **one quantitative simulation** to develop her opinions.
- Plaintiffs have still not provided all backup data necessary for Defendants to evaluate Rosenthal's opinions. For example, Rosenthal's models are generated using 39 distinct computer programs, but Plaintiffs have not provided any information about the order in which these programs should be executed or how they produce the results in Rosenthal's reports. Indeed, when many of these programs are run, they produce error messages and fail to replicate the results presented in the report. Without this information, Defendants cannot replicate Rosenthal's calculations.

Mark A. Schumacher

- Schumacher's report is approximately 141 paragraphs and 66 pages. Schumacher's report includes exhibits of manufacturer-specific marketing (Exhibit A) and sales representative call notes (Exhibit B), and purports to consider over 100 Bates-stamped documents (Appendix 2).
- Schumacher purports to issue **multiple opinions about Manufacturer Defendants** on key issues, including marketing, causation, and pain management.
 - Example: Opines that "Defendants [purportedly] influenced physicians through direct-to-physician marketing, medical education, and industry-sponsored and -funded Key Opinion Leaders ('KOLs') to prescribe long-term opioids based on misinformation about the risks and benefits of chronic opioid use."

- Example: Opines that “for the vast majority of chronic pain patients, the risks of prescription opioids significantly outweigh any benefits, and that at most, a small percentage of chronic pain patients achieve meaningful relief from the long-term use of opioids.”
 - Example: Opines that “the medical standard of care for treating both chronic and acute pain was changed as a result of widespread promotion and marketing of opioids by Defendants.”
- Given the nature of these opinions, Defendants require additional time to question Schumacher about its particular opioid medicines, its marketing (if any), its sponsorship (if any) of third-party materials, and the alleged influence (if any) on physician prescribing in the Track 1 jurisdictions.
 - Example: The report addresses several Purdue-specific marketing documents and includes an Exhibit of internal Purdue communications (Exhibit C).
- Schumacher purports to consider 300 articles (Appendix 2), but, to date, Plaintiffs have not yet produced any materials that are not “publicly and easily available without cost (e.g., over the Internet)” (Dkt. 941 at 7). A request for these materials has been made.